

CLAIM AMENDMENTS:

Claim 1 (Cancelled).

Claim 2 (Currently Amended): A method of water analysis in a semiconductor manufacturing process for detecting a presence of microorganisms in a water sample, comprising:

providing a membrane as a filter;

filtering out the microorganisms in the water sample in the semiconductor manufacturing process, using the membrane;

growing the microorganisms on the membrane with a nutrient solution;

staining the microorganisms on the membrane with potassium permanganate ($KMnO_4$);

rinsing the membrane with purified deionized water; and

performing a colony count for the microorganisms on the membrane after rinsing the membrane with purified deionized water.

Claim 3 (Previously Presented): The method of water analysis according to claim 2, wherein a pore size of the membrane is about 0.3 μm in diameter.

Claim 4 (Previously Presented): The method of water analysis according to claim 2, wherein the water sample is filtered through the membrane by a vacuum filtration technique.

Claim 5 (Previously Presented): The method of water analysis according to claim 2, wherein the microorganisms are cultivated on the membrane at about 30°C, using 2 ml of nutrient solution.

Claim 6 (Original): The method of water analysis according to claim 2, wherein the concentration of KMnO₄ is about 0.02M (mole per liter).

Claim 7 (Previously Presented): The method of water analysis according to claim 2, wherein after the microorganisms on the membrane are stained with KMnO₄ for about 10 to 30 seconds, the membrane is rinsed with purified deionized water.

Claim 8 (Currently Amended): A method of water analysis in semiconductor manufacturing process for separately detecting a presence of microorganisms in a plurality of water samples, comprising:

providing a plurality of membranes as filters;

filtering out the microorganisms in each of the water samples in the semiconductor manufacturing process, using a corresponding one of the membranes, separately;

growing the microorganisms on different membranes with a nutrient solution for different times;

staining the microorganisms on each of the membranes with potassium permanganate ($KMnO_4$);

rinsing each of the membranes with purified deionized water; and

performing a colony count for the microorganisms on each of the membranes after rinsing each of the membrane with purified deionized water.

Claim 9 (Previously Presented): The method of water analysis according to claim 8, wherein a pore size of the membrane is about $0.3 \mu m$ in diameter.

Claim 10 (Previously Presented): The method of water analysis according to claim 8, wherein each of the water samples is filtered through a corresponding membrane by a vacuum filtration technique.

Claim 11 (Previously Presented): The method of water analysis according to claim 8, wherein the microorganisms are cultivated on each of the membranes at about $30^\circ C$, using 2 ml of nutrient solution.

Claim 12 (Previously Presented): The method of water analysis according to claim 8, wherein the microorganisms on each of the membranes are cultivated for 24, 48, 72, and 96 hours, respectively.

Claim 13 (Original): The method of water analysis according to claim 8, wherein the concentration of KMnO₄ is about 0.02 M (mole per liter).

Claim 14 (Previously Presented): The method of water analysis according to claim 8, wherein the microorganisms on each of the membranes are stained with KMnO₄ for about 10 to 30 seconds.

Claim 15 (New): The method of water analysis according to claim 2, further comprising taking at least one photograph of the water sample after performing the colony count for the microorganisms on the membrane.

Claim 16 (New): The method of water analysis according to claim 8, further comprising taking at least one photograph of the water sample after performing the colony count for the microorganisms on each of the membranes.